UNIVERSITY OF ILLINOIS BULLETIN

ISSUED WEEKLY

Vol. XV SEPT. 24, 1917 No. 4

[Entered as second-class matter December 11, 1912, at the post office at Urbana, Illinois under the Act of August 24, 1912]

SYLLABUS

OF

Domestic Science and Domestic Art

FOR THE

High Schools of Illinois

FIRST EDITION 1911
SECOND EDITION 1914
Reprint 1917

PUBLISHED BY THE UNIVERSITY OF ILLINOIS
URBANA

INTRODUCTION

For the information of those interested the following notes concerning the development of this Syllabus are hereby given.

In 1907, believing that the time had come for more determined efforts to introduce domestic science and domestic art into the public schools of Illinois, the Department of Household Science of the University of Illinois invited a few interested persons to consider such plans with them at the time of the High School Conference, November, 1907. As a result of that meeting the following persons were chosen to serve as a committee: Miss Isabel Bevier, Chairman; Mrs. Mary Pierce Van Zile, Miss Carrie Galt, Miss Helena M. Pincomb, Mr. J. H. Browning, and Mr. T. C. Clendenen.

This committee undertook the preparation of a syllabus for the unifying of the work in domestic science and domestic art in the high schools of the state. Owing to the unorganized condition of the work, the committee found it necessary to make a syllabus flexible enough to meet very different conditions. It seemed to them better to suggest an orderly development of the subjects Food, Clothing, and the Home and to leave to individual schools the selection of the work as well as the allotment of time to each. In July, 1908, the syllabus was published. In November, 1908, it was discussed in the newly organized Domestic Science Section of the High School Conference. A new committee consisting of the following persons was appointed: Miss Helena M. Pincomb, Chairman; Miss Jenny Snow and Miss Carrie Galt. This committee was asked to formulate a definition for a unit of entrance credit.

The committee defined one unit of entrance credit in Household Science as follows:

a. An equivalent of 180 hours of prepared work with at least two recitation periods a week in foods.

b. An equivalent of 180 hours of prepared work with at least one recitation period a week in clothing.

c. An equivalent of 180 hours of prepared work with at least two recitation periods a week on the home. (Two periods of laboratory work are considered equivalent to one period of prepared work.)

1. Of the above, (a) will be accepted as a unit's work.

2. Two half units taken from a and b, or a and c, or b and c will be accepted as a unit's work.

The syllabus is recommended as a basis for a unit of entrance credit.

The work is to be done by trained teachers with individual equipment as determined by inspection.

This definition was adopted by the Domestic Science Section of the High School Conference in November, 1909, and by the University. It was also voted that the syllabus should be revised. The work of revision was given into the hands of the new executive committee for the year 1909-10, Miss Helena M. Pincomb, Chairman, Miss Helen M. Day, Miss Carrie Galt, Miss Kate L. Brown, and Miss Isabel Bevier, *ex-officio*. The revised copy was adopted by the Domestic Science Section of the Conference November 18, 1910.

The committee offers the following explanation of the revision. First, in accordance with the vote of the last meeting the terms theory and practice have been changed to recitation and laboratory; and the name Syllabus of Domestic Science for the High Schools of Illinois to Syllabus of Domestic Science and Domestic Art for the High Schools of Illinois. The general plan of the Syllabus has not been changed. It has been amplified by the addition of related work and references.

Second, an orderly development of the subject has been attempted, but the limits of time or material may in some cases modify the practice; for example, the kitchen, fuels and water are placed at the beginning of the food course, but it is not the thought of the committee that several lessons will be spent on this before taking up the subject of fruit.

Third, owing to existing conditions the committee feels that the amount of work covered in one year must vary, but suggests that the work in clothing should be preceded by "sewing" in the grades, and that the course in foods should be preceded by "cooking" in the grades and by at least one course in elementary science in the high school.

Fourth, the course on the home seems to the committee very desirable work for the senior year. It begins with a study of homes of primitive people, but passes quickly to the planning, construction and sanitary aspects of a modern house, its furnishings and care. In connection with the care of the house the care of the individual and the family are considered and their relation and responsibility to the community. Here, too, attention is given to the economic side of household management and to the importance of the home.

Fifth, the committee for the present year are to consider the relation of the topics food, clothing, and the home to the other subjects of the curriculum especially in regard to the time required, and to their place in the curriculum, so that the syllabus may gain in definiteness.

The Committee hereby expresses their appreciation of the helpful suggestions of many teachers and ask for a continuance of their favors.

COMMITTEE FOR 1910,

HELENA M. PINCOMB, *Chairman*
HELEN M. DAY
CARRIE GALT
KATE L. BROWN
ISABEL BEVIER

SYLLABUS

FOOD

RECITATION	LABORATORY
The kitchen. Shape and size. Equipment. Desk and individual equipment. Cupboard and group equipment. Sinks and supply tables. Refrigerator. Burners and ranges. Care of. Reasons for cleanliness. Means of securing cleanliness. Importance of order and neatness.	List and care for articles in desk. Clean and conveniently arrange cupboards. Care of sinks and supply tables by different girls—housekeepers. Clean refrigerator. Wash dishes and towels. Care for burners and ranges. Read gas meter. Calculate cost of gas per hour.
Fuels and their combustion. Kinds and classes. Value of different fuels. Calorific, economic. As to convenience. Essentials of combustion. Meaning of kindling point. Products of combustion. Cause and effect of incomplete combustion. Need for ventilation of kitchen.	Note effect of closed and open mixer of burner, closed and open drafts of stoves. Build and regulate fire. Ventilate laboratory and class room.

RELATED WORK	REFERENCE
The home. Selection and arrangement of convenient and suitable equipment for kitchen; furniture, utensils, and linen. Study of plumbing. Pipes, fixtures, traps. Action of different cleaning agents. Suitable water and towels for cleaning. Economy of cleaning. Source and production of fuels.	Barrows. Principles of Cookery. Dodd. Chemistry of the Household. Elliott. Household Hygiene. Elliott. Household Bacteriology. Gibson. Convenient Houses. Parloa. Home Economies. Richards & Elliott. Chemistry of Cooking and Cleaning. Rocheleau. Great American Industries. Williams & Fischer. Elements of the Theory and Practice of Cookery. Wilson. Handbook of Domestic Science and Household Arts. U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins. No. 268. Industrial Alcohol: Sources of Manufacture. No. 269. Industrial Alcohol, Uses and Statistics. No. 298. The Fireless Cooker. No. 342. The Model Kitchen. No. 353. The Ice Box. Office of Exp. Station Bulletin. No. 130. Denatured Alcohol Manufacture. Journal of Home Economics, Dec., 1909. Fuels and Their Utilization in Cooking.
Chemistry and physics or elementary science. Meaning of elements and compounds. Study of carbon, hydrogen, oxygen and nitrogen, and their combinations as found in air, water, food and fuels. Chemical and physical changes. Meaning of. Illustrations applicable to the home.	

RECITATION	LABORATORY
Water. Kinds and composition. Uses. As a cleaning agent. As a medium in cooking. Uses in the body. Purification of water. Household methods. Treatment of hard waters.	Determine temperature of water. When small bubbles begin to rise. When larger bubbles rise and break at the surface. When the whole surface is agitated. Determine temperature of steam. Determine temperature in double boiler. Determine source of home and school water supply. Soften water for cleaning.
Fruits. Uses of various grades of fresh fruits. Composition and value as food. Processes of preparing fresh fruits. Decay of fruit. Cause and prevention of decay. Means of destroying micro-organisms. Resistance of spores. Methods of preserving fruits and vegetables. Sorting, cleaning, storing. Drying. Sterilizing. Use of sugar, spices, vinegar. Low temperature, cold storage.	Sort fruit for different purposes. List fruits according to water content. Cook fruits in various ways as boiling, baking, stewing, scalloping. Observation of decay and mold of fruit. Examination of bacteria and mold under microscope. Determine conditions favoring and retarding growth of micro-organisms. Can fruits and vegetables. Different methods. Preserve and pickle. Make jellies, butters, jams, etc. Cook dried fruits. Compare weight of fruit before and after soaking.

RELATED WORK	REFERENCE
The home. Water supply: source, danger of contamination, purification. Pathogenic bacteria found in drinking water. Physiology. Various uses of water in the body.	Hutchison. Food and Dietetics. Sedgwick & Hough. The Human Mechanism. Snyder. Human Foods. U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 73. Pure Water. No. 124. Distilled Drinking Water. No. 262. Water for Table Use. No. 309. Ice for Household Use. University of Illinois Bulletin, Vol. 7, No. 2. Chemical and Biological Survey of the Waters of Illinois.
Commercial Geography. The fruit industry. Physiology. Value of fruit in the diet. Botany. Microscopic plants. Structure and growth.	Barrows and Lincoln. Home Science Cook Book. Bevier & Van Meter. Selection and Preparation of Food. Carpenter. How the World is Fed. Conn. Bacteria, Yeasts, and Molds. Farmer. Boston Cooking School Cook Book. Green. Food Products of the World. Hill. Practical Cooking and Serving. Knight. Food and Its Functions. Lincoln. The Boston Cook Book. Norton. Food and Dietetics.

RECITATION	LABORATORY
Fruits—*continued.* Fraudulent and harmful preservatives. Uses of preserved fruits. Comparison of fresh and preserved fruits and vegetables. As to cost. As to food value. Food laws governing sale of fresh and preserved fruits and vegetables.	
Vegetables. Composition. Classes. According to part of plant used. According to composition. According to flavor.	Preparation of different classes of vegetables — tomatoes, cabbage, potatoes, carrots, turnips, onions. Different methods as boiling, steaming, stewing, creaming, baking, scalloping, sautéing. White sauce for different purposes. Cream soups.

RELATED WORK	REFERENCE
	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 154. The Home Fruit Garden. No. 169. The Farmers' Fruit Garden. No. 175. Home Manufacture and Use of Unfermented Grape Juice. No. 203. Canning fruits, Preserves and Jellies. No. 388. Jelly and Jelly-Making. Good Housekeeping Magazine, June, 1909. The Secret of Good Jelly. Journal of Home Economics, Feb., 1910, Jelly-Making; Jan., 1909, Effect of Sugar and Temperature on Fruit Juices.
Botany. Development of plant. Formation of starch and cellulose. Storage of starch. In seeds, leaves, bulbs, tubers, roots. Structure of starch cell. Starch cells of different plants.	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 73. Cooking Vegetables. No. 84. Potatoes as Food. No. 244. Cooking Quality of Potatoes. No. 256. Preparation of Vegetables for the Table. No. 265. The Home Vegetable Garden. No. 295. Potato and Root Crops as Food. No. 342. Cooking Beans and Other Vegetables in the Home.

RECITATION	LABORATORY
Vegetables—*continued.* Study of Starch. Structure and composition. Properties. Effect of heat; moist, dry. Effect of acids. Tests for starch. Digestion and value as food. Method of cooking as related to composition. Value of vegetables in the diet.	Examine section of potato to see starch cells. List ways of preventing lumping of starchy materials. Determine thickening power of different starchy materials. Use iodine test on different foods. Dextrinize flour—make toast, croutons, etc.
Cereals. Composition. Value as food. Structure. Manufacture. Kinds. Comparative value and cost. Effect of different methods of cooking on flavor and digestion.	Cook cereals. Different kinds. Different methods. Use fireless cooker if possible. List amounts of different cereals that ten cents will buy.
Sugar. Source, kinds, and composition. Manufacture of sugars and syrups. Properties. Effect of heat: moist, dry. Effect of acid. Digestion and value as food. Danger of excess. Adulteration of confectionery.	Make syrup test with thermometer. Make peanut brittle, caramel. Make syrup, frosting, marguerites. Make fudge, fondant, creams. Figure cost of home made and purchased candies. Trip to candy factory or kitchen if possible.

RELATED WORK	REFERENCE
Chemistry and physics or elementary science. Carbohydrates. Kinds, composition, tests. Chemical and physical changes. Physiology. Digestion and nutritive value of starch and cellulose.	Office of Exp. Station Bulletin No. 43. Composition and Digestibility of Potato and Eggs. Illinois Exp. Sta. Bulletin No. 149. The Farmers' Vegetable Garden.
	Farmers' Bulletins. Nos. 105, 237, 249. Cereal Breakfast Foods. No. 281. Corn as Food for Man. No. 298. Food Value of Corn and Corn Products. No. 316. Cooking Cereal Foods. Office of Exp. Station Bulletin No. 200. Course in Cereal Foods and Their Preparation. Conn. Exp. Station. Report 1904. Nutritive Value of Prepared Cereals. Ill. Exp. Sta. Bulletin No. 87. Structure and Composition of the Corn Kernel. Iowa Exp. Sta. Bulletin No. 74. Breakfast Foods. Wyoming Exp. Sta. Bulletin No. 33. Composition of Prepared Cereals.
Commercial geography. The sugar industry. Physiology. Digestion and nutritive value of sugar.	Farmers' Bulletins: No. 93. Sugar as Food. No. 135. Sorghum Syrup Manufacture. No. 329. Cane Sugar and Beet Sugar.

RECITATION	LABORATORY
Milk.	Separate milk into its parts.
Composition.	Make:
Value as food.	Butter.
Value of Casein. Importance of nitrogen.	Cottage cheese.
Nutritive value for the young and adult.	Junket.
Effect of heat.	Cocoa.
Effect of high temperature in making cottage cheese and junket.	
Relation of temperature of cooking to digestion.	
Effect of pasteurizing and sterilizing on nutritive value and flavor.	Compare scalded and boiled milk.
Effect of acids, rennet, bacteria.	
Care of milk.	
Importance of cleanliness and low temperature.	
Milk as a carrier of infection.	
Milk as found on the market.	Visit a good public dairy if possible.
Modified, certified, condensed, malted, etc.	Investigate school and home milk supply.
Factors in cost of milk.	
Milk products.	
Effect of cleanliness and temperature on flavor.	
Food laws concerning milk and milk products.	
Inspection of dairies and wagons.	

RELATED WORK	REFERENCE
Chemistry or elementary science.	
Testing milk for fat, starch, protein.	Holt. Care and Feeding of Children.
Testing for amount of fat—Babcock test.	U. S. Dep't of Agri., Washington, D. C.
Precipitation, coagulation.	Bureau of Animal Industry:
	Bulletin No. 74. U. S. & State Standards for Dairy Products.
Commercial geography.	Circular No. 114. Sanitary Milk Production.
The dairy industry.	Circular No. 142. Some Important Factors in the Production of Sanitary Milk.
	Circular No. 143. Milk and Its Products as Carriers of Tuberculosis Infection.
	Circular No. 158. Improved Methods for the Production of Market Milk by Ordinary Dairies.
	Farmers' Bulletins:
	No. 29. Souring of Milk.
	No. 42. Facts About Milk.
	No. 63. Care of Milk on the Farm.
	No. 237. Care of Cream on the Farm.
	No. 348. Bacteria in Milk.
	No. 363. Use of Milk as Food.
	No. 366. Milk Supply in Chicago.
	No. 384. Whipped Cream.
	No. 413. The Care of Milk and Its Use in the Home.
	Reprint from Year-book No. 444. Bacteria in Milk.

RECITATION	LABORATORY
Cheese. Composition. Manufacture and kinds. Value of bacteria and molds in producing flavor. Digestion and value as food.	
Eggs. Composition. Value as food. Importance of albumen. Structure. Preservation. Cause of decay. Methods of preserving. Means of testing. Effect of heat and methods of cooking. Economy in use of eggs. Cost at different seasons. Substitutes for eggs.	Preserve eggs for winter use. Test eggs for freshness. Determine effect of different temperatures on eggs. Cook eggs in different ways. Soft and hard cooked. Poached. Omelet. Determine cost of egg dishes at different seasons.
Combinations. Milk, eggs, cheese.	Make custards, rarebits, souffles, macaroni and cheese.

RELATED WORK	REFERENCE
	Chicago Dep't of Health. Rules Regulating the Handling and Sale of Milk. Ill. Exp. Sta. Bulletin No. 120. Milk Supply of Chicago and Twenty-Six Other Cities. Md. Exp. Sta. Bulletin No. 136. Whipped Cream.
	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 92. Pure Cultures of Bacteria for Cheese Making. No. 144. Curing Cheese. No. 166. Cheese Making on the Farm. No. 186. Curing Cheese in Cold Storage. No. 202. Manufacture of Cottage Cheese. No. 237. Swiss Cheese. No. 244. Food Value of Cottage Cheese.
Commercial geography. The poultry industry. Elementary science. Test eggs for starch, sugar, and protein. Properties of albumin. Effect of heat, water, acids, ferments. Physiology. Digestion of egg in various forms. Raw—plain and beaten. Cooked at high and low temperatures. Finely and coarsely divided.	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 87. Food Value of Eggs. No. 103. Preserving Eggs. No. 122. Selling Eggs by Weight; Flavor of Eggs. No. 190. Cost of Eggs in Winter. No. 251. Fertility of Eggs. Conn. Exp. Sta. Bulletin No. 55. Infection and Preservation of Eggs.

RECITATION	LABORATORY
Meat. Structure. Composition and nutritive value. Selection of Meat. Freshness, age and condition of animal. Location and cost of cut. Suitability of cut to purpose. Flavor of meat. Importance of extractives. Ripening of meat. Effect of heat. On connective tissue and walls of tubes. On juices or contents of tubes. Reasons for cooking. Methods of cooking. Tender and tough cuts. Retention of juices by searing. Extraction of juices by soaking, etc. Breaking up of connective tissues by cutting or grinding. Removal of connective tissue by scraping. Softening connective tissue by long slow cooking in water. Special methods of preparing and cooking veal, mutton, pork, poultry, fish and special organs. Use of left overs. Suitable combinations of flavor. Dangers from stale meat-food poisoning.	Scrape tough and tender meat to determine structure and cause of toughness. Experiment with meat to determine some of the constituents and their characteristics. Examine cuts of meat used. As to location of bone. Amount of fatty tissue. Color and grain of muscle. Draw animal showing location of cuts. Visit meat market if possible. Preparation of tender cuts. Broil, roast. Preparation of tough cuts. Make meat stock, various stock soups, beef juice, beef tea. Make Hamburger or loaf. Make scraped meat sandwiches or meat balls. Make pot roast, stew or friccassee. Possibly use fireless cooker. Preparation of veal, mutton, pork, poultry and fish, including oysters. Different methods as sautéing, roasting, stewing, frying, creaming. Make dressing for roast. Make sauces for serving. Use left-over meats in various ways as scallop, meat pies, hash, sandwiches, etc.

RELATED WORK	REFERENCE
Commercial Geography. The beef industry. The effect of age and care of animal on structure of beef. Packing houses, cost of production.	U. S. Dep't of Agri., Washington, D. C. Bureau of Animal Industry Circulars: No. 25. Federal Meat Inspection Service. No. 108. Trichinosis—a Danger in the Use of Raw Pork as Food. Farmers' Bulletins: No. 34. Composition and Cooking of Meat. No. 85. Fish as Food. No. 162. Cooking Meat. No. 182. Poultry as Food. No. 183. Meat on the Farm, Butchering, Curing, Keeping. No. 193. Cooking Meat. No. 391. Economical Uses of Meat in the Home. Office of Experiment Station Bulletins: No. 102. Losses in Cooking Meat. No. 193. Studies of the Effect of Different Methods of Cooking upon the Thoroughness and Ease of Digestion of Meat.
Physiology. Formation of muscular and fatty tissue. Effect of exercise on muscles. Breaking down of muscles, formation of extractives. Digestion and nutritive value of meat.	
Zoology. Parasites found in meat. Kinds and temperature for destroying.	Ill. Exp. Sta. Bulletin No. 147. Market Classes and Grades of Meat.

RECITATION	LABORATORY
Meat—*continued.* Preservation of meat and uses of preserved meats. Cold storage, canning, use of preservatives. Relation of preservatives used to method of cooking. Cost of meat. Of different cuts and animals. At different seasons. As compared with meat substitutes. Food laws concerning fresh and preserved meats.	List vegetables and seasonings that go well with different meats. Cook bacon, "boiled" ham, corned beef, etc. List cuts of meat according to price. List foods that might be substituted for meat in the diet.
Gelatin. Source. Commercial preparation. Properties. Composition. Value as food. In carrying flavor. In furnishing nourishment. Function in the body.	Make gelatin from meat and bone. Make gelatine preparations using commercial gelatin. Plain gelatin, charlottes, etc. Compare fruit gelatin with "ready to use" preparations.
Legumes and nuts. Composition. Value as food. Use as meat substitutes. Digestion of.	Baked Beans. Dried pea or lentel soup. Salted almonds and peanuts.

RELATED WORK	REFERENCE
	University of Ill. Study. A Precise Method of Roasting Beef. Pratt Institute Charts. Beef, Veal, Mutton, Pork. Whitcomb & Barrows, Charts. Cuts of meat.
Physiology. Effect of heat, acids and ferments on gelatin. Change of connective tissue to gelatin. Digestion of connective tussue and gelatin.	
Botany. Source of nitrogen in plants. Action of bacteria in preparing nitrogen for the plant.	U. S. Dep't of Agri. Farmers' Bulletins. No. 25. Peanut Culture and Uses. No. 121. Beans, Peas and Other Legumes as Food. No. 122. Nuts as Food. No. 169. Food Value of Beans. No. 332. Nuts and Their Uses as Food. Ill. Exp. Sta. Bulletin 94. Nitrogen Bacteria and Legumes.

RECITATION	LABORATORY
Fat. Composition. Value as food. Function in the body. Digestion of fat and foods coated with fat. Kinds, source, form. Structure of fatty tissue. Application of heat. Danger of accidents in frying. From combustion of fat. From expansion of moisture. Means of preventing fat soaking. Scorching of fat. Economy in using fat. Cost of various kinds. Butter substitutes for cooking. Food laws concerning various fats.	Render fat. Determine temperature for frying cooked and uncooked materials. Fry cooked and uncooked foods. Use different fats. Clarify fat. Use partially decomposed fat for soap making.

RELATED WORK	REFERENCE
Physiology. Foods producing fatty tissue. Digestion of fat.	U. S. Dep't of Agri., Washington, D. C. Bureau of Animal Industry Circulars: No. 56. Facts Concerning the History, Commerce, and Manufacture of Butter. No. 127. Tubercle Bacilli in Butter. Bureau of Chemistry Bulletin: No. 77. Olive Oil and Its Substitutes. Farmers' Bulletins: No. 36. Cotton Seed and Its Products. No. 131. Household Tests for the Detection of Oleomargarine and Renovated Butter. No. 186. Keeping Quality of Butter. No. 241. Butter Making on the Farm. Reprint from Year-Book No. 390. Renovated Butter, Its Origin and History. Illinois Exp. Sta. Bulletin No. 131. A Study of Factors Influencing the Composition of Butter. Illinois Exp. Sta. Circular No. 131. Handling of Cream and Making of Butter on the Farm.
The home. Means of excluding air in case of fire or burn. Removal of fat stains. Physics and chemistry. Decomposition of fat. Characteristics of emulsions. Saponification. Soap making.	

RECITATION	LABORATORY
Combinations of food materials.	
Batters and doughs.	
Flour.	Determine main constituents of flour.
Composition.	
Kinds and classes.	Determine properties of gluten.
According to composition.	Visit flour mill if possible.
According to process of manufacture.	
According to grains used.	
Value of the different classes.	
As food.	
For bread making.	
Leavening agents and their action.	
Air and steam.	
Effect of heat.	Determine tests for different oven temperatures.
Importance of elasticity of white of egg and gluten.	Make sponge cake and popovers.
Carbon-dioxide.	Make cereal griddle cakes, muffins, cakes, biscuits, pastry, steam puddings.
Action of soda with sour milk, molasses, cream of tartar.	Determine effect of combining soda with sour milk, soda with cream of tartar and baking powder with moisture.
Action of baking powder.	
Different kinds.	
Effect of heat and moisture.	
Action of yeast.	Determine suitable temperature and food for yeast.
Different kinds.	
Conditions favorable and unfavorable to growth.	
Products of fermentation.	

RELATED WORK	REFERENCE
	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 119. Banana Flour. No. 305. Gluten Flours. No. 374. Flour for Baking Powder Biscuits. No. 412. Milling and Baking tests with Durum Wheat. No. 326. Macaroni Wheat. No. 903. Wheat, Flour and Bread.
Commercial geography. The flour industry. Effect of climate and soil on composition of wheat. Manufacture.	Maine Exp. Sta. Bulletin No. 103. Entire Wheat Flour.
Physics. Transmission of heat. Conduction, convection, radiation.	
Chemistry or elementary science. Properties of acids, bases, salts. Effect of combining acids and bases. Composition of baking soda. Test for carbon dioxide. Baking powder. Composition of different classes. Products formed. Test for alum.	Conn. Exp. Sta. Report for 1904., Pt. II. Food Products, Baking Powder. North Carolina Exp. Sta. Bulletin No. 155. Baking Powder on Sale in N. Carolina.
Physiology. Effect of residues from different baking powders.	
Botany. Study of yeast, molds, bacteria.	

RECITATION	LABORATORY
Bread. Methods of making. Materials used. Relation to kind and condition of yeast. Amount and kind of flour. Reasons for kneading. Relation of temperature and amount of yeast to time. Baking. Time and temperature. Changes produced. Care of bread after baked. Souring and other undesirable changes in bread. Comparison of home made and baker's bread. Need of standard. Digestion of yeast breads, quick breads and toast. Nutritive value and cost of bread.	Bread making. Short and long process. Plain, whole wheat, graham, rye. Rolls, plain and fancy. Judge bread. Visit bakery if possible. Determine cost of bread made. Make toast, croutons, sandwiches, etc.
Salads. Value in diet. As nourishment. As an appetizer. For furnishing variety. For the mineral of fresh fruits and vegetables. Economic value. Preparation. Importance of freshness and crispness. Importance of thorough washing of uncooked foods.	Select materials for salads. Prepare materials for salads. Salad plants. Other materials as spring fruits and vegetables, winter fruit and vegetables, meats, nuts, eggs and cheese, left-overs. Salad dressings. Cooked, French and Mayonnaise. Attractively arrange materials. Determine cost of salads made.

RELATED WORK	REFERENCE
	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 112. Bread and Bread Making. No. 114. Skim Milk in Bread Making. No. 193. Bread and Toast. No. 389. Bread and Bread Making. Office of Exp. Sta. Bulletins: No. 101. Studies on Bread and Bread Making. No. 126. Digestion and Nutritive Value of Bread. No. 143. Digestion and Nutritive Value of Bread. No. 156. Digestion and Nutritive Value of Bread and Macaroni. Purdue University, Biology Dep't Food Series: No. 5. Yeasts and Their Properties. No. 6. Bread and Bread Making.
Botany. Growth of salad plants. Evaporation and absorption of water by plants.	Hill. Salads, Sandwiches and Chafing Dish Dainties.

RECITATION	LABORATORY
Salads—*continued.* Importance of attractiveness in arrangement of color, form and texture, size of service, garnish. Suitable combinations, considering flavor, food nutrients, digestion.	
Frozen dishes. Value of frozen dishes. Freezing. Cause of freezing. Construction of freezer. Use of fireless cooker.	Care of freezer. Make water ices, sherbets, ice creams and mousse. Determine temperature of freezing mixture and frozen material. Determine cost of desserts made. Improvise freezer for individual use.
Beverages. Tea, coffee, cocoa, chocolate. Important constituents. Methods of preparation. Buying, and care in the home. Physiological effects. Fruit drinks Value in the diet. In sickness and health. Kinds.	Make: Tea and coffee. Compare steeped and boiled tea and coffee. Cocoa and chocolate. Fruit drinks.
Special preparations for the sick.	Make preparations used in liquid and semi-liquid diet. Prepare invalids tray.

RELATED WORK	REFERENCE
Art. Pleasing color combinations.	
Physics. Transmission of heat. Conducting and non-conducting materials. Latent heat of fusion. Freezing point of solutions. Commercial geography. Commercial refrigeration.	
Commercial geography. Tea, coffee and chocolate industries. Growth and commercial preparation. Chemistry. Properties of tannic acid. Test for tannic acid. Physiology and chemistry. Stimulants. Uses of water in the body.	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 122. Coffee Substitutes. Wm. Baker & Co. Ltd., Dorchester, Mass. History and Use of Cocoa and Chocolate.
	Boland. Handbook of Invalid Cookery. Farmer. Food and Cookery for the Sick and Convalescent. Sachse. How to Cook for the Sick.

RECITATION	LABORATORY
Summary.	Review note books.
Definition of food.	Make classification of foods studied.
Classification of food according to food principles.	List foods according to their protein fat and carbohydrate content.
Temperature suitable for each class.	List foods rich in the different kinds of mineral matter.
Digestion and assimilation of each class.	Weigh portions of food that are equivalent in total nutrients, total protein, or that yield 100 calories or that represent a Chittenden or Atwater meal.
Value of food and food requirements.	
Function of each class.	
Comparative value of different foods.	
Food value represented by calories.	
Food requirement represented by blocks, figures or charts.	
Food requirements for people of different ages and occupations.	
National and foreign investigations.	
Dietary standards of various investigators.	
Importance of purity of food.	
Cost of food.	Compare cost of different cooking lessons during the year.
Comparative cost of different classes of food.	
Cost of food at different seasons.	
Relation of cost of food to total cost of living and to income.	

RELATED WORK	REFERENCE
Chemistry. Relation of classification of food to their chemical composition. Effect of heat on the composition of foods. Physiology and chemistry. Digestion. Digestive organs, juices and ferments. Digestion of protein, fat, carbohydrate alone and in combination. Nutrition. Production of body tissues. Production of heat and energy. Production of waste. Relation of the respiratory, circulatory and excretory systems to nutrition. Body requirements.	Leach. Food Analysis and Inspection. Pattee. Diet in Disease. Richards. First Lessons in Food and Diet. Richards. Food Materials and Their Adulteration. Richards. Cost of Food. Richards. Cost of Living. Thompson. Practical Dietetics. Winters. Feeding of Infants. U. S. Dep't of Agri., Washington, D. C. Bureau of Chemistry Bulletins: No. 13. Food Adulteration. No. 69. Food and Food Control. No. 100. Some Forms of Food Adulteration and Simple Methods for Their Detection. No. 112, Pt. 2. Food Legislation Ending June, 1907. Bureau of Chemistry Circulars: No. 16. Officials Charged with the Enforcement of the Food Laws. No. 42. The Effect of Formaldehyde on Digestion and Health. Bureau of Education Bulletin: No. 3. Daily Meals for School Children.

RECITATION	LABORATORY
Planning meals. Means of reducing cost. Means of securing variety. Meals for different seasons, occasions, individuals, etc. Meals for the sick and convalescent.	Plan meals suitable for breakfast, luncheon, dinner, supper. Plan meals for 10, 20, 30 or 40 cents per day. Plan meals for a day with special reference to economy of time, labor and fuel. Plan a meal in which one person shall be hostess and maid. Practice preparing and serving the meal at home. Plan meals for: Summer and winter. Active laborer and office worker. The aged, the young. The sick, rheumatic, diabetic. The convalescent.
The lunch to be packed and carried.	Plan, prepare and pack lunches. For the school child. For the laboring man. For students of the class.
Selection and buying of food materials. Selection of food for a meal or day as planned. Observation of: Condition of food in the market. Freshness. Cleanliness. Protection of food. Condition of the market.	List food materials needed for the preparation of meals planned. List amount of certain materials needed to serve a large company. Make market list of staple and fresh supplies needed at home for a week. Visit market and stores. Select and buy for home or school use.

RELATED WORK	REFERENCE
	Farmers' Bulletins: No. 122. The Working of a Pure Food Law. No. 125. Protection of Food From Injurious Temperatures. No. 142. Nutritive and Economic Value of Food. No. 375. Care of Food in the Home. Office of Exp. Sta. Bulletin: No. 28. Composition of American Food Materials. Charts: Composition of Foods, and Food Requirements. Office of Exp. Sta. Circulars: No. 46. Function and Uses of Food.
Civics and economics. Relation of supply and demand. Bacteriology. Bacteria on carelessly handled food materials. Danger of infection through food materials.	No. 89. (A List of Dietary Studies). Office of Exp. Sta. Documents: No. 713. Investigation of the Nutrition of Man in the U. S. No. 1027. Nutrition Investigation of the Office of Exp. Station and their results.

RECITATION	LABORATORY
Selection and buying of food materials—*continued.* Advantages and disadvantages of buying in quantity. Relation of consumer and dealer to the pure food law. Importance of checking up bills and keeping accounts. Advantages and disadvantages of cash and credit systems.	Keep account of actual cost of meals prepared and compare with estimated cost. Keep account of cost of food at home for a week or month.
Preparation and service of meals. Plan of work. Economy of time, labor and fuel. Relation of plan to hour of service and other work of the day. Provision for comfort and pleasure. The beauty of simplicity, order and cleanliness. Reasons for points in setting table, service and eating. Characteristics of a gracious hostess and a successful waitress. Assistance of members of the family. Importance of the family meal and the relation of different members to it.	Prepare meals. Take care of dining room. Sweep, dust, ventilate and regulate temperature and light. Set the table. Serve meals. Breakfast, luncheon, dinner, supper. Serve class and guests. Practice serving as hostess, cook, waitress and guest.

RELATED WORK	REFERENCE
	U. S. Dep't of Agri. Office of the Secretary: Food Inspection Decisions. Reprints from Year-book: No. 221. The Use and Abuse of Food Preservatives. No. 455. Use of the Microscope in Detecting Food Adulterations. No. 451. The Detail of the Enforcement of the Food and Drug Act. No. 454. Food and Diet in the U. S. No. 342. The Respiration Calorimeter. Cornell University Extension Dep't. Human Nutrition, Parts I and II. Ill. Farmers' Institute, Dep't of Household Science Year Book, 1909. Classified List of Foods. Ill. State Food Commission, Manhattan Bldg., Chicago. Annual Report of State Food Commissioner. Ill. Dairy and Food Laws. Journal of Home Economics: Oct., 1909. Daily Meals for School Children. Feb., 1910. Progress in Nutrition. Apr., 1910. School Lunches.
The home. Kitchen and dining room. Location. Plan for convenient, sanitary and comfortable and attractive rooms. List of furnishings with cost. Care of rooms. Laundering of linens. Sewing. Hemming and darning linen. Chemistry. Nature of materials used for cleaning glass, silver, etc. Physiology. Effect of "bolting food". Psychic influence on digestion. Art. Suitable color combinations. Relation of decoration to purpose. Application of color and design in making menu cards and decorating table. English. Good form for invitations and acceptances.	Hill. Up-to-Date Waitress. Kingland. Book of Good Manners. Larned. Hostess of Today. Springsteed. Expert Waitress.

THE HOME

RECITATION	LABORATORY
Shelter and home life. Of different peoples and ages; primitive, ancient, medieval, colonial, modern. Homes in immediate locality. Different parts of town or county. Advantages of the older and newer houses. Imperfections of each.	Collect pictures of shelter used by man at different ages and places. Report on houses and something of home life in different sections of locality. Report on good and objectionable points of own house. Study pictures illustrating good and poor conditions.
Location of the house. City, country, or suburban — surroundings and amount of money to be spent. Study of soil and site. Exposure to sun, prevailing winds. Natural drainage.	
House planning and construction. Kind of house. Materials used and workmen employed. Style and size suitable for location and family. Study of rooms as to use—size, shape, furniture. Arrangement of rooms. Essential part of construction.	Visit houses in the process of construction. Make sketch of individual rooms showing location and size of furniture. Make plans for basement, 1st and 2nd floors.

RELATED WORK	REFERENCE
History and geography. The evolution of shelter and home life. Relation of location and climate to kind of shelter needed.	Bevier. The House. Campbell. Household Economics. Clark. Care of the House. Earle. Home Life in All Lands. Elliot. Household Hygiene. Gannett. The House Beautiful. Gibson. Convenient Houses. Mason. Origin of Inventions. Mason. First Steps in Human Progress. Ormsby. The House Comfortable. Parloa. Home Economics. Poor. Rural Hygiene. Powell. The Country Home. Price. Handbook of Sanitation. Richards. Sanitation in Daily Life. Richards & Talbot. Home Sanitation. Ritchie. Primer of Sanitation. Roberts. The Farmstead. Starr. First Steps in Human Progress. Stickley. Craftsman Houses. U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 126. Some Practical Suggestions for Farm Buildings. No. 270. Modern Conveniences for the Farm Home. No. 317. The Farm Home. No. 342. A Model Kitchen.
Physiography. Formation and properties of various soils. Commercial geography. Building materials. Source, cost, etc. Drawing. Floor plans.	

RECITATION	LABORATORY
Heating, lighting, ventilation. Study of various systems as to construction, convenience, cost and efficiency. Study of fuels and management of fires. Relation of heating and lighting to ventilation. Relation of respiration to ventilation. Methods of ventilation. Natural. Mechanical. Fresh air in relation to health. Fresh air cures.	Examine school and other public systems of heating and ventilation. Take temperature of room at different times and in different parts of the room. Build and manage fires at school or home. Care for lamps. Read gas and electric meters. Prove presence of carbon dioxide in the room. Ventilate room in different ways.
Water Supply. Source of public and private supply. Necessity for pure supply. Sources of contamination. Methods of purification. Municipal and domestic. Natural and artificial. Construction of wells and cisterns.	Visit water works and sewage plant if possible. Report on home well or cistern. Report on work of State Water Survey and Board of health.
Disposal of waste—sewage, garbage. Rural and city methods. Immediate, final. Relative merits of various ways of disposing of waste. Sanitary, economic.	

RELATED WORK	REFERENCE
Physics and chemistry. Transmission of heat. Diffusion of gases. Combustion—light, heat. Calorific value of various fuels. Composition of air. Pure, vitiated. Food. Fuels used for cooking. Management of fire. Geography. Distribution of coal and natural gas. Physiology. Need of oxygen for the body. Effect of bad air. Desirable temperature. Light in relation to eye strain.	Office of Exp. Sta. Farmers' Institute, Lecture 8, Farm Architecture. Reprint from Year-Book No. 475. The Wastes of the Farm. No. 518. Comforts and Conveniences in Farmers' Homes. Commissioner of Buildings, Chicago or Other Cities. Municipal Code Governing Erection of Buildings. Iowa Agri. College Extension Dep't. Healthful Homes.
	Prudden. Drinking Water and Ice Supplies. Sedgwick & Hough. The Human Mechanism. U. S. Dep't. of Agri., Washington, D. C. Farmers' Bulletins: No. 43. Sewage Disposal on the Farm. No. 73. Pure Water. No. 124. Distilled Drinking Water. No. 262. Water for Table Use. No. 296. Wells and Pure Water. No. 309. Ice for Household Use. Reprints from Year-Book: No. 262. The Contamination of Public Water Supply by Algae. No. 457. Hygienic Water Supplies for Farms.

RECITATION	LABORATORY
Plumbing. Fixtures, traps and pipes. Purpose of seal, how maintained. Location of pipes. Reference to cold, ease in repairing and cleaning.	Draw plumbing system for the house or practice locating parts of plumbing. Clean fixtures, traps, and pipes.
Finishing. Exterior. Material, color. Interior. Floors, walls, ceilings. Suitability. Cleanliness, durability. Artistic effect.	Collect samples of papers and other wall coverings. Collect samples of woods suitable in kinds and finish for the interior. Possibly try different methods of finishing samples of woods.

RELATED WORK	REFERENCE
Physics. Water pressure and syphonage. Cause of bursting of pipes. Expansion of liquids and solids.	Good Housekeeping, Aug. 1908, Feb. 1909. The Public Drinking Cup. Illinois Board of Health Bulletin, Vol. 5, No. 9. Water on Trains. Journal of Home Economics. Dec., 1909. Influence of Pure Water and Air on Health. N. H. Sanitary Bulletin No. 3, Vol. 4. How Typhoid Germs are Scattered. University of Illinois Bulletins: Vol. 6, No. 3. Mineral Content of Ill. Waters. Vol. 6, No. 4. Municipal Water Supplies of Ill. Vol. 7, No. 2. Chemical and Biological Survey of the Waters of Illinois.
Manual training. Kinds of wood suitable. Method of finishing woods, paints, oils, varnish, etc.	Batchelder. Principles of Design. French. Homes and Their Decoration. Ward. Color, Harmony and Contrast. Wheeler. Household Art. Wheeler. Principles of Decoration. Country Life in America. Craftsman. Good Housekeeping. House Beautiful. N. D. Exp. Sta. Bul. No. 86. Some Ready Mixed Paints.

RECITATION	LABORATORY
Furniture and furnishings. Consider as to, Use — fulfilling of purpose, suitability. Special needs of each room. Sanitary value. Condition when purchased. Ease of keeping clean. Artistic value. Harmony and color. Good line and form. Quality in wood and textiles. Hangings, rugs or other floor coverings. Cost. First cost. Durability and labor to keep clean.	Examine furniture at school and home. Trip to stores and factories if possible. Make list of furniture and furnishings for different rooms. Kitchen, dining room, bed room, living room, sewing room, laundry. Practice selecting and combining samples of wood, wall coverings, and textile fabrics which would be suitable for different rooms. Plan color schemes for rooms with different light exposures.
The lawn and garden. Laying out and care of.	

RELATED WORK	REFERENCE
Art. Study of color. Harmony. Contrast. Gradation. Effect of lines. Vertical. Horizontal. Designs for household articles. Color schemes for interiors using water colors or textile materials, wall paper, etc. Principles governing hanging of pictures and arrangement of room. Domestic art. Making household articles. Table and bed linen, towels. Table covers, cushion covers, etc.	
	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 185. Beautifying the Home Grounds. No. 195. Annual Flowering Plants. No. 248. The Lawn. Reprint from Year-Book No. 242. Plants as a Factor in Home Adornment. Ill. Exp. Sta. Circulars: No. 135. How to Fix Up the Yard. No. 138. The Small Home Yard.

RECITATION	LABORATORY
Care of the home.	Clean glass and metals.
The house.	Clean wood work.
Source and danger of dirt.	Clean refrigerator.
Ways of preventing accumulation of dirt.	Make and use furniture polish.
Ways of removing dirt.	Bed-making and care of bed-room.
Order of cleaning a room.	Sweep and dust.
Materials for cleaning.	Make dust gardens.
Comparative cost and value of agents used.	Make list of cleaning materials, giving advantages of each.
Care of different rooms.	
Care of various kinds of furniture, furnishings and wood work.	
Laundry work.	
Materials used.	Laundering.
Water, soap, bluing, starch.	Remove stains.
Agents for removing stains.	Make Javelle water.
Agents for softening water.	Wash and iron.
Steps in the process.	
Household pests.	

RELATED WORK	REFERENCE
Chemistry. Soap. Effect of acids, etc., upon metals, wood, and paint.	Balderston and Lunerich. Laundry Manual. Conn. Bacteria, Yeasts and Molds. Conn. Story of Germ Life.
Botany or elementary science. Bacteria and molds. Classes, growth.	Gulich. Hygiene Series. Osman. Cleaning and Renovating at Home. Prudden. Dust and Its Dangers. Prudden. Story of the Bacteria.
	Richards & Elliott. Chemistry of Cooking and Cleaning. Shepperd. Laundry Work. Vail. Approved Methods of Laundering.
Clothing. Effect of heat, moisture and soap on different textile fibers.	U. S. Dep't of Agri., Washington, D. C. Bureau of Entomology Circulars: No. 5. The Carpet Beetle or "Buffalo Moth." No. 34. House Ants. No. 36. The True Clothes Moth. No. 46. Hydrocyanic Acid Gas Against Household Insects. No. 47. The Bed-Bug. No. 51. Cockroaches. No. 71. House-flies. Cornell University Extension Dep't. Insect Pests of House and Garden. Maryland Exp. Sta. Bul. No. 134. The Brown Tail Moth, the House-fly, the Mosquito.

RECITATION	LABORATORY
Care of the person. Removal of waste from the body. Excretory system. The skin, its structure and function. Effect of baths, hot and cold. Effect of exercise, fresh air. Effect of diet. Value of water, fresh fruits and vegetables, bulk. Mastication and regularity in diet. Care of hands, nails, mouth, head and feet. Relation of exercise, fresh air, sleep, diet and cleanliness to health. Relation of personal hygiene to the public.	Estimate of amount of water needed for drinking and cleaning per day. Make list of helps and how to use them for personal hygiene. Make list of common hindrances to health.
Care of the family. The young and aged. The sick. The home nurse, her characteristics and duties. Care of herself. Care of sick room. Daily care of patient. Contagion and infection. Theory of disease. Air, water and food as carriers. Dangers of public drinking cup, etc. Insects and animals as carriers of disease.	Make list of diseases carried by air, water, insects.

RELATED WORK	REFERENCE
Physiology and hygiene. Nervous system. Digestive system. Excretory system. Hygienic clothing.	Le Bosquet. Personal Hygiene. Meylan. Personal Hygiene. Ravenhill. Practical Hygiene. U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 377. Harmful Headache Mixtures. Boston Health Education League. Booklets on Hygiene.
Food. Food requirements. For infants, the aged, the sick. For the school girl.	Harrison. Home Nursing. Holt. Care and Feeding of Children. Manning. First Principles of Nursing. Pope. Home Care of the Sick. Winter. Feeding of Infants.
Bacteriology. Disease germs. How spread. How killed. Conditions favoring and retarding growth.	U. S. Dep't of Agri., Washington, D. C. Farmers' Bulletins: No. 155. How Insects Affect the Health of Rural Districts. No. 412. The Typhoid or House-fly.

RECITATION	LABORATORY
Care of the family—*continued.* Work of Board of Health. Protection of public on street and car. Laws prohibiting expectorating, etc. Importance of clean streets. Precautions to prevent spread of disease. Isolation, disinfection. Examination of milk, water, and food supply.	Report on work of Board of Health. Expose dust gardens out of doors on a windy day.
Emergencies. Treatment for fainting, wounds, hemorrhages, burns, frostbites, sprains, dislocation, fractures, drowning, suffocation. Poisons. Classes—treatment. Transporting the injured.	Prepare and apply antiseptics, bandages, splints, poultices. Make list of emergency outfit.

RELATED WORK	REFERENCE
	Office of Solicitor Circular. No. 13. The Quarantine Law. City Health Ordinances. Ill. Board of Health, 1909. Cause and Prevention of Consumption. Journal of Home Economics: Apr., 1909. Campaign Against Tuberculosis. Apr., 1909. Typhoid. June, 1909. The Fly and Typhoid. Aug., 1910. Communicable Diseases and Sanitation. Aug., 1910. Kill the Fly. Richmond, Va., City Health Dep't. Extermination of the Mosquito. State Board of Health Bulletins.
	Hope. Till the doctor comes.

RECITATION	LABORATORY
Maintenance of the home. Relation of individuals to family as a whole. Division of labor. Some responsibility for each member of family. Management. Division of income. Buying. Economy and use of money. Relative merits of cash and charge systems. Banking. Importance of planning. Buying in quantity, storage. Keeping accounts. System in work. Various kinds of work. Best time for doing. Relative importanace. Economy in time and strength. Labor saving devices. Importance and use of leisure time. Relation of home to society. Effect of extravagance. Effect of carelessness and bad management upon the community. Hospitality.	List ways in which the high school girl might assist in the home. Plan expenditure of imaginary salary for one month, compare with actual budget and actual expense if possible. Plan supplies to be ordered for a month, week or day. Report on market prices at different seasons. Keep account of actual expenses, personal and family. Plan work for one week.
Summary. Importance of the home. To the individual. To the family. To the community. Influence of the community upon the home.	List problems of the home maker in the effort to have the home attractive, comfortable, happy, and healthful.

RELATED WORK	REFERENCE
Food. Cost of food. Planning meals. Preparing and serving meals. Clothing. Cost of clothing. Economics. Law of supply and demand.	Campbell. The Easiest Way in Housekeeping and Cooking. Hunt. Home Problems From a New Standpoint. Richards. The Art of Right Living. Richards. The Cost of Cleanliness. Richards. The Cost of Food. Richards. The Cost of Living. Richards. The Cost of Shelter. American School of Home Economics, Sept., 1908. Up-to-date Home—Labor Saving Devices. Atlantic Monthly, Apr., 1910. Cost of Living. Cornell University Extension Dep't. Saving strength. Good Housekeeping, Apr., 1910. Cost of Living. Journal of Home Economics: Dec., 1909. A Study of Household Expenditures. Feb., 1910. Standardizing the Home—The Dwelling House Score Card.

CLOTHING

RECITATION	LABORATORY
Equipment for sewing. Equipment needed for hand-sewing. The work box and its contents. Sewing machine. Construction and care of. Suitable chairs and tables. Lighting of the room.	Select and list price of individual sewing equipment. Clean, oil, and use machine and attachments.
Use or purpose of clothing. Fulfillment of purpose. Under and outer garments. Suitability of clothing for various occasions — business, home, sick room, etc. Clothing in relation to health. Effect of too little and too much clothing. Effect of pressure. Loosely and closely woven fabrics. Non-porous clothing.	Collect reference and pictures of clothing of primitive and modern times. Possible trip to library and museum or store to see fabrics and garments of ancient and modern use. Criticise own clothing on basis of purpose. Plan clothing for various seasons and occasions.

RELATED WORK	REFERENCE
History. Invention of sewing machine, and its effect on the household. Physics. Construction of sewing machine. The home. Location and furnishing of sewing room. Lighting of sewing room. History. The evolution of clothing from primitive to modern times. The adornment of savages. The protection of primitive man. Different materials used. Clothing of various races and ages. Inventions making modern processes possible and their effect on progress and home life. Hygiene and physiology. Structure and function of the skin. Respiration and circulation. Hygiene of clothing.	Blair. Sewing and Garment Drafting. Byrn. Progress of Invention in the 19th Century. Earle. Colonial Days in Old N. Y. Earle. Customs and Fashions in Old New England. Earle. Home Life in Old Colonial Days. Earle. Two Centuries of Costume in America. Harrington. Manual of Hygiene. Jolly. Man Before Metals. Le Bosquet. Personal Hygiene. Mason. Origin of Invention. Mason. Woman's Share in Primitive Culture. Morris. Home Life in All Lands. Rocheleau. Great American Industries. Robida. Ten Centuries of Costume in America. Sedgwick & Hough. The Human Mechanism. Starr. First Steps in Human Progress. Watson. Textiles and Clothing. Craftsman Magazine, Vol. 9, p. 749. Ten Generations of Fashion. Journal of Home Economics, June, 1910. Hygienic Dress and Dress Reform. Review of Reviews, Vol. 7, p. 312. Dress Reform.

RECITATION	LABORATORY
Materials used. Cotton, wool, flax, silk. Structure and composition. Effect of heat, acids, alkalies, moisture, light. Conductive and absorptive properties of the different fibers. Suitability of each for under and outer clothing. Manufacture of the fibers into clothing. Bleaching, dyeing. Printing, mercerizing. Use of uncommon fibers such as jute, ramie, pineapple, cocoanut. Leather, fur, and rubber as materials for clothing.	Collect samples of raw materials. Examine fibers. Test samples to determine quality. Fiber or fibers present. Closeness of weave. Adulterants. Trip to carpet loom or factory if possible. Determine characteristics of warp and woof of cloth. Make textile collections illustrating the variety, quality and price of finished products of different fibers.

RELATED WORK	REFERENCE
Commercial geography and history.	Carpenter. How the World is Clothed.
Growth and cultivation of fibers.	Chamberlain. How We Are Clothed.
Labor involved and cost of producing different fibers.	Cole. Encyclopedia of Dry Goods.
Evolution of spinning and weaving.	Dana. Cotton from Seed to Loom.
Modern process of manufacture.	Hunt. Forage and Fiber Crops of America.
	McLaren. Spinning Woolen and Worsted.
	Marsden. Cotton Spinning.
	Marsden. Cotton Weaving.
	Matthews. Textile Fibers.
	Wilkinson. Story of the Cotton Plant.
	Wright. Industrial Evolution of the United States.
	U. S. Dep't of Agri., Washington, D. C.
	Farmers' Bulletins:
	No. 27. Flax for Seed and Fiber.
	No. 69. Flax Culture.
	No. 137. Angora Goat.
	No. 165. Silk Worm Culture.
	No. 274. Flax Culture.
	No. 302. Sea Island Cotton.
	Office of Exp. Sta. Bulletin:
	No. 33. The Cotton Plant; History, Botany, Characteristics, Culture, and Uses.
	Office of Fiber Investigation. Report 4,
	Flax Culture in Ireland, Belgium, Austria, Russia. Report 106, Flax for Seed and Fiber.

RECITATION	LABORATORY
Selection of materials for class use. For articles or garments. Purpose, cost, durability. Width, amount, allowing for shrinkage. Color, design, weave, and finish. Genuineness, quality. For trimming. Comparative value of hand and machine work. Desirable qualities for trimmings. Good edge, simple design. Kinds of embroidery, laces, drawn work, etc. Harmony of material and trimming in quality and color. Inappropriateness of color in trimming undergarments.	Examine samples and discuss suitability. Combine samples of textile fabrics to show suitable color, quality, and finish for suits for different occasions and individuals. Buy materials for articles to be made. Select trimmings, thread, etc. List cost of materials.
Selection of design for making. Purpose of article. Form and size of individual. Personality and occupation of individual. Artistic effect. Good lines. Good color combinations. Effect of light on materials of various color, quality, finish. Time and money to expend on making and laundering.	Make design for garments. Take measures. Draft patterns. Compare and use drafted and bought patterns. Criticise designs for clothing in magazines and papers.

RELATED WORK	REFERENCE
History and economics. Laces of different ages and races. Conditions under which hand work is done. Price paid for hand labor. Lives of people doing work.	Reprints from Year-Book: No. 234. The Future Demand for American Cotton. No. 308. Consumption of Cotton in Cotton States. No. 313. U. S. Dep't of Agri. and Silk Culture. No. 314. Growing of Long-Staple Upland Cotton. Cosmopolitan, July, 1904. Cotton. Corticelli Silk Mills. Silk, Its Origin, Culture, and Manufacture. Harper's Weekly, Mar. 5, 1910. Deceiving the Shopper. Outlook, Vol. 69, p. 59. Cotton. Scribner, Vol. 90. Manufacture of Clothing.
Art. Designing dresses, hats, and suits for different occasions. Coloring designs made for different occasions and individuals. Lines of human form. Straight lines and good curves. Artistic and appropriate designs for trimmings, household articles and personal articles as belt buckles, hand bags, card cases, etc.	Batchelder. Principles of Design. Gingles. Garment Drafting and Simple Rule Method. Ward. Color, Harmony, and Contrast. Craftsman. Delineator. Good Housekeeping. Harper's Bazaar.

RECITATION	LABORATORY
Cutting. Economy. Matching pattern in cloth. Arrangement of pattern with weave.	Cut out garments.
Making. Characteristics of good workmanship in the making of garments or articles.	Keep materials and hands clean while sewing. Baste, fit, stitch and finish undergarments as drawers, underwaist and skirt or gown. Make suitable seams, bands, bindings, facings, corners. Make tucks and put on trimmings. Make shirt waist and wash dress. Possibly make wool skirt.
Household fabrics and articles. Suitability of textile, color weave and finish to purpose.	Make simple and more difficult decorative stitches on underwear, waist or household articles. Make designs for patterns to be worked. Buttonhole edge of towel, scarf, center piece or undergarment. Design and embroider monograms for linen or underwear. Possibly make lace or drawn work for trimming a small article.

RELATED WORK	REFERENCE
	Hapgood. School Needle Work. McGlauflin. Handicraft for Girls. Wakerman & Heller. Scientific Sewing. Woolman. Sewing Course for Schools. Butterick Pattern Co. Dressmaking Up-to-Date; Embroideries and their Stitches.
The home. Textile furnishings for dining room, bed rooms, and living room.	Wheeler. Household Art. Wheeler. Principles of Decoration.

RECITATION	LABORATORY
Gift Sewing. Importance of usefulness. Suitability of article to person.	List of household and personal articles that might be designed, made and decorated for gifts. Plan a certain number of articles for a given price. Design, make, and decorate one or more articles.
Millinery. Study of materials used as braids, silks, satins, velvets, feathers, flowers. Color, harmony, and study of line in relation to the face, figure, and costume. Style of hat to suit a becoming and suitable arrangement of the hair. Work of the Audubon society.	Plan color and design to fit one's own face and personality. Select materials. Renovate materials. Make a simple hat or select materials and style and have it made, or make over a hat, or select and combine samples of materials that harmonize in color, quality and finish. Figure cost of hat made or selected. Criticise prevailing style.
Care of clothing. New clothing. Sanitary condition of garments. Consumer's League, White List. Laundering or sunning and airing of clothing as it comes from the store. Clothing that has been worn. Airing and folding or hanging after wearing. Brushing, pressing. Mending. Importance of fastenings, bindings, etc.	Report on sanitary conditions of stores and those handling garments with the Consumer's League mark. Report on ready made garments bought or seen in the stores. Darn and patch.

RELATED WORK	REFERENCE
Art. Designing hats and suits for different people and occasions. Color and form in relation to the face and figure.	
Civics and Economics. Sanitary condition of factories. Laws regulating child labor and sweat shops.	Conn. Bacteria, Yeasts, and Molds. Conn. Story of Germ Life. Prudden. Dust and Its Dangers. Chautauquan, Vol. 59, p. 106. Consumer's League. Consumer's League, 105 E. 22d St., N. Y. City. Consumer's League Literature. Outlook, Vol. 91, p. 616. Consumer's League.
Hygiene. Bathing.	Survey, Vol. 23, p. 700. Consumer's League.

RECITATION	LABORATORY
Care of clothing—*continued.* Laundering. Marking. Place for soiled clothing. Effect of heat, soap, and water on different fabrics, finishes, and colors. Setting of colors. Removal of stains. Renovating and freshening old garments. Storing or packing the winter clothing. Life history and habits of the moth.	Mark clothing. Wash and iron clothing or samples of cotton, wool, linen, and silk of different colors and finishes. Remove stains from clothing.
Cost of clothing. Comparative cost and desirability of ready made, home made, and tailored clothing. Reducing cost of clothing. Planning supplies and buying in quantity. Careful selection of time to buy. Avoiding extremes. Keeping accounts. Monthly and yearly summary. Simplifying design for making. Use of material and style that are easily laundered and pressed. Use of simple hand work in place of elaborate trimmings. Relation of cost of clothing to total cost of living and to income. Suitability of apparel in relation to income.	Figure cost of materials in garments made. Figure cost of labor in making garments. Compare cost of garments of the same quality when made by students, when bought ready made, and when they are hired made. Plan and figure cost of clothing for one year. Compare cost of different articles as underclothing, dresses, hats. List materials that might be bought in quantity. Plan to reduce cost to the minimum. Keep account of money spent for clothing for a certain period. Compare with plan made for clothing for the year. Make charts showing relation of cost of clothing to total cost of living and to income. Criticise own clothing on basis of healthfulness, artistic qualities, economy and suitability.

RELATED WORK	REFERENCE
The home. Equipment of place for doing laundry work. Agents used. Steps in the process. The home and public laundry.	Dodd. Chemistry of the House hold. Osman. Cleaning and Renovating at Home. Parloa. Home Economics. Richards & Elliott. Chemistry of Cooking and Cleaning. Shepperd. Laundry Work. U. S. Dep't of Agri., Washington, D. C. Bureau of Entomology Circular: No. 36. The True Clothes Moth.
Civics and economics. Law of supply and demand. Cost of raw materials. Cost of labor and machinery. Cost of patents. Cost of skilled and unskilled labor. Cost of producing materials of new design and finish as compared with old and standard patterns. Laws governing conditions in factories; child labor and sweat shops.	